



December 8, 2023

**MEETING NOTICE
JOINT RECYCLED WATER POLICY ADVISORY COMMITTEE
(CITY OF SAN JOSE/CITY OF SANTA CLARA/SANTA CLARA VALLEY WATER DISTRICT)**

Members of the Joint Recycled Water Policy Advisory Committee (JRWPAC):

Valley Water Director Hon. Tony Estremera, Committee Chair
Valley Water Director Hon. Richard Santos
Valley Water Director Hon. Jim Beall
CSJ District 4 Hon. Councilmember David Cohen
CSJ District 5 Hon. Councilmember Peter Ortiz
CSC District 3 Councilmember Karen Hardy

Supporting Valley Water Staff Members:

Rick Callender, Esq., Chief Executive Officer
Carlos Orellana, District Counsel
Michele King, Clerk of the Board
Melanie Richardson, Assistant Chief Executive Officer
Darin Taylor, Chief Financial Officer
Christopher Hakes, Chief Operating Officer - Watersheds Aaron
Baker, Chief Operating Officer – Water Utility
Rachael Gibson, Chief of External Affairs
Brian Hopper, Sr. Assistant District Counsel
Sam Bogale, Deputy Operating Officer
Bhavani Yerrapotu, Deputy Operating Officer
Marta Lugo, Deputy Administrative Officer
Kirsten Struve, Assistant Officer
Emmanuel Aryee, Deputy Operating Officer
Donald Rocha, Assistant Officer
Vincent Gin, Deputy Operating Officer
Hossein Ashktorab, Unit Manager, Recycled and Purified Water
Lei Hong, Utility Ops & Maintenance Manager
Charlene Sun, Treasury and Debt Manager
Medi Sinaki, Senior Engineer, Water Quality

Supporting City of San Jose Staff Members:

Jeff Provenzano, Deputy Director, Water Resources Division
Kerrie Romanow, Director, Environmental Services
Nora Frimann, City Attorney
Matthew Tolnay, Deputy City Attorney
Kip Harkness, Deputy City Manager
Pedro Hernandez, Program Manager, South Bay Water Recycling
Erica Gamboa, Administrative Assistant, Environmental Services Department
April Kellett, Staff Specialist

Supporting City of Santa Clara Staff Member:

Kathy Watanabe, Councilmember, District 1
Lisa Gillmore, Mayor
Gary Welling, Assistant Director, Water & Sewer Facilities

A Santa Clara Valley Water District (SCVWD) special Joint Recycled Water Policy Advisory Committee meeting has been scheduled to occur at 11:00 a.m. on Friday, December 15, 2023 at Valley Water Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, CA 95118.

Members of the public may join the meeting via Zoom Teleconference at: <https://valleywater.zoom.us/j/83371245441>

The meeting agenda and corresponding materials are located on Valley Water's website at: <https://www.valleywater.org/how-we-operate/committees>.



THIS PAGE INTENTIONALLY LEFT BLANK



Santa Clara Valley Water District Joint Recycled Water Policy Advisory Committee

Headquarters Building Boardroom
5700 Almaden Expressway, San Jose, CA 95118

Join Zoom Meeting
<https://valleywater.zoom.us/j/83371245441>

SPECIAL MEETING AGENDA

**Friday, December 15, 2023
11:00 AM**

District Mission: Provide Silicon Valley safe, clean water for a healthy life, environment and economy.

JOINT RECYCLED WATER POLICY ADVISORY
COMMITTEE W/ CITY OF SAN JOSE, SANTA
CLARA/SCVWD

Tony Estremera - SCVWD Dist. 6
Richard Santos - SCVWD Dist. 3
Jim Beall - SCVWD Dist. 4
David Cohen - City of San Jose Dist. 4
Peter Ortiz - City of San Jose, Dist. 5
Karen Hardy - City of Santa Clara, Dist. 3

All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body, will be available to the public through the legislative body agenda web page at the same time that the public records are distributed or made available to the legislative body. Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to participate in the legislative body's meeting. Please advise the Clerk of the Board Office of any special needs by calling (408) 265-2600.

Kirsten Struve (Staff Liaison)

Nicole Merritt
(COB Liaison)
Asst. Deputy Clerk II
nmerritt@valleywater.org
408-630-3262

Notice: Board Agenda, exception items and supplemental items will be posted prior to the meeting in accordance with the Brown Act.

**Santa Clara Valley Water District
Joint Recycled Water Policy Advisory Committee
with Cities of San Jose and Santa Clara**

SPECIAL MEETING AGENDA

December 15, 2023

11:00 AM

Headquarters Building Boardroom
5700 Almaden Expressway, San Jose, CA 95118

Join Zoom Meeting
<https://valleywater.zoom.us/j/83371245441>

****IMPORTANT NOTICES AND PARTICIPATION INSTRUCTIONS****

Santa Clara Valley Water District (Valley Water) Board of Directors/Board Committee meetings are held as a “hybrid” meetings, conducted in-person as well as by telecommunication, and is compliant with the provisions of the Ralph M. Brown Act.

To maximize public safety while still maintaining transparency and public access, members of the public have an option to participate by teleconference/video conference or attend in-person. To observe and participate in the meeting by teleconference/video conference, please see the meeting link located at the top of the agenda. If attending in-person, you are required to comply with Ordinance 22-03 - AN ORDINANCE OF THE SANTA CLARA VALLEY WATER DISTRICT SPECIFYING RULES OF DECORUM FOR PARTICIPATION IN BOARD AND COMMITTEE MEETINGS located at <https://s3.us-west-2.amazonaws.com/valleywater.org.if-us-west-2/f2-live/s3fs-public/Ord.pdf>

In accordance with the requirements of Gov. Code Section 54954.3(a), members of the public wishing to address the Board/Committee during public comment or on any item listed on the agenda, may do so by filling out a Speaker Card and submitting it to the Clerk or using the “Raise Hand” tool located in the Zoom meeting application to identify yourself in order to speak, at the time the item is called. Speakers will be acknowledged by the Board Chair in the order requests are received and granted speaking access to address the Board.

- Members of the Public may test their connection to Zoom Meetings at: <https://zoom.us/test>
- Members of the Public are encouraged to review our overview on joining Valley Water Board Meetings at: <https://www.youtube.com/watch?v=TojJpYCxXm0>

Valley Water, in complying with the Americans with Disabilities Act (ADA), requests individuals who require special accommodations to access and/or participate in Valley Water Board of Directors/Board Committee meetings to please contact the Clerk of the Board’s office at (408) 630-2711, at least 3 business days before the scheduled meeting to ensure that Valley Water may assist you.

This agenda has been prepared as required by the applicable laws of the State of California, including but not limited to, Government Code Sections 54950 et. seq. and has

not been prepared with a view to informing an investment decision in any of Valley Water's bonds, notes or other obligations. Any projections, plans or other forward-looking statements included in the information in this agenda are subject to a variety of uncertainties that could cause any actual plans or results to differ materially from any such statement. The information herein is not intended to be used by investors or potential investors in considering the purchase or sale of Valley Water's bonds, notes or other obligations and investors and potential investors should rely only on information filed by Valley Water on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System for municipal securities disclosures and Valley Water's Investor Relations website, maintained on the World Wide Web at <https://emma.msrb.org/> and <https://www.valleywater.org/how-we-operate/financebudget/investor-relations>, respectively.

Under the Brown Act, members of the public are not required to provide identifying information in order to attend public meetings. Through the link below, the Zoom webinar program requests entry of a name and email address, and Valley Water is unable to modify this requirement. Members of the public not wishing to provide such identifying information are encouraged to enter "Anonymous" or some other reference under name and to enter a fictional email address (e.g., attendee@valleywater.org) in lieu of their actual address. Inputting such values will not impact your ability to access the meeting through Zoom.

Join Zoom Meeting:

<https://valleywater.zoom.us/j/83371245441>

Meeting ID: 83371245441

Join by Phone:

1 (669) 900-9128, 83371245441#

1. CALL TO ORDER:

1.1. Roll Call.

2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THE AGENDA.

Notice to the public: Members of the public who wish to address the Board/Committee on any item not listed on the agenda may do so by filling out a Speaker Card and submitting it to the Clerk or using the "Raise Hand" tool located in the Zoom meeting application to identify yourself to speak. Speakers will be acknowledged by the Board/Committee Chair in the order requests are received and granted speaking access to address the Board/Committee. Speakers' comments should be limited to three minutes or as set by the Chair. The law does not permit Board/Committee action on, or extended discussion of, any item not on the agenda except under special circumstances. If Board/Committee action is requested, the matter may be placed on a future agenda. All comments that require a response will be referred to staff for a reply in writing. The Board/Committee may take action on any item of business appearing on the posted agenda.

3. APPROVAL OF MINUTES:

- 3.1. Approval of September 6, 2023 Joint Recycled Water Policy Advisory Committee Meeting Minutes. [23-1257](#)
Recommendation: Approve the minutes.
Manager: Candice Kwok-Smith, 408-630-3193
Attachments: [Attachment 1: 090623 JRWPAC Minutes](#)
Est. Staff Time: 5 Minutes

4. REGULAR AGENDA:

- 4.1. Expansion of the Purified and Recycled Water System and Development of a Potable Reuse Project. [23-1247](#)
Recommendation: A. Discuss development of a roadmap and next steps to develop needed agreements for the expansion of the purified and recycled water system and development of a potable reuse project to ensure our community is more drought resilient per the November 17, 2023 action at the joint meeting of the Valley Water Board and the San José City Council; and
B. Request staff to return with the roadmap, including mutual objectives, timelines and resources needed to complete agreements within two years no later than April 2024 to the JRWPAC.
Manager: Kirsten Struve, 408-630-3138
Attachments: [Attachment 1: PowerPoint](#)
Est. Staff Time: 20 Minutes

5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS.

This is an opportunity for the Clerk to review and obtain clarification on any formally moved, seconded, and approved requests and recommendations made by the Committee during the meeting.

6. ADJOURN:

- 6.1. Adjourn to Regular Meeting at 10:00 a.m., on April 18, 2024.



Santa Clara Valley Water District

File No.: 23-1257

Agenda Date: 12/15/2023

Item No.: 3.1.

COMMITTEE AGENDA MEMORANDUM Joint RWPAC with Cities of San Jose/Santa Clara

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Approval of September 6, 2023 Joint Recycled Water Policy Advisory Committee Meeting Minutes.

RECOMMENDATION:

Approve the minutes.

SUMMARY:

A summary of Committee discussions, and details of all actions taken by the Committee, during all open and public Committee meetings, is transcribed and submitted for review and approval. Upon Committee approval, minutes transcripts are finalized and entered into the Valley Water's archives and serve as the historical record of the Committee's meeting.

ENVIRONMENTAL JUSTICE IMPACT:

There are no Environmental Justice impacts associated with this item.

ATTACHMENTS:

Attachment 1: 090623 JRWPAC Minutes

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193

THIS PAGE INTENTIONALLY LEFT BLANK

**JOINT RECYCLED WATER POLICY ADVISORY COMMITTEE
CITY OF SAN JOSÉ/SCVWD/CITY OF SANTA CLARA**

DRAFT MINUTES

**WEDNESDAY, SEPTEMBER 6, 2023
11:00 AM**

(Paragraph numbers coincide with agenda item numbers)

1. CALL TO ORDER:

A special meeting of the Santa Clara Valley Water District (Valley Water) Joint Recycled Water Policy Advisory Committee (Committee) was called to order in the Valley Water Headquarters Building Boardroom at 5700 Almaden Expressway, San Jose, California, and by Zoom teleconference, at 11:00 a.m.

1.1 Roll Call.

Valley Water Board Committee members in attendance were District 4 Director Jim Beall, District 3 Director Richard Santos, and District 6 Director Tony Estremera, Chairperson presiding.

City of San José/Santa Clara members in attendance were City of San José Councilmembers David Cohen and Peter Ortiz; and City of Santa Clara Councilmember Karen Hardy constituting a quorum of the Committee.

Valley Water staff members in attendance were: Antonio Alafaro, Hossein Ashktorab, Aaron Baker, Henry Barrientos, Nastaran Basiri, Lakeisha Bryant, Rachael Gibson, Walter Gonzalez, Ashley Guerrero, Zachary Helsley, Brian Hopper, Girlie Jacobson, Michele King, Candice Kwok-Smith, Emelia Lamas, Sean Lee, Dave Leon, Marta Lugo, Becky Manchester, Carlos Orellana, Nicole Merritt, Steve Peters, Don Rocha, Michelle San Miguel, Diahann Soleno, Kirsten Struve, Charlene Sun, Darin Taylor, David Tucker and Beckie Zisser.

City of San José/Santa Clara staff members in attendance were: Erica Gamboa, Kip Harkness, Pedro Hernandez, Henry Louie, Shilpa Mehta, Nicholas Ochoa, Jeff Provenzano, Sachin Radhakrishnan, Brisa Rojas, Kerrie Romanow, Marlee Smith, Rosa Tsongtaatarii, and Gary Welling.

Public in attendance were: Paul Brown (Paul Redvers Brown Inc.), Phillippe Daniel (Liquisti LLC.), Jan Davel (CDM Smith), Jenny Gain (Brown and Caldwell), Katja Irvin (Sierra Club-Loma Prieta Chapter), Jennifer Pratt, Shane Trussell (Trussell Technologies), John Varela (Valley Water), and Paul Ward.

2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THE AGENDA

Chairperson Estremera declared time open for public comment on any item not on the agenda.

Katja Irvin expressed the Sierra Club of California's support for the Committee's mission, noted wastewater recycling and conservation as the state's main source of new water, and urged the exploration of the following: expanded outreach programs, timeline of the pilot project, initiation of the feasibility study for a larger project, and continued collaboration with the Committee.

3. APPROVAL OF MINUTES:

3.1 Approval of April 13, 2023 Joint Recycled Water Policy Advisory Committee Meeting Minutes.

Recommendation: Approve the Minutes.

Public Comments:
None.

It was moved by Director Santos, seconded by Councilmember Cohen, and was carried by majority vote, that the minutes be approved. Councilmember Hardy abstained from the vote per not being present at the meeting.

4. REGULAR AGENDA:

4.1 Receive the Public Outreach Efforts Update in Support of the Purified Water Program and Provide Feedback.

Recommendation: Receive information and provide feedback.

Don Rocha reviewed the information on this item, per the attached Committee Agenda Memo, and Sherilyn Tran reviewed the information contained in Attachment 1.

Sherilyn Tran was available to answer questions.

Katja Irvin suggested doing outreach for the state's direct potable reuse (DPR) regulations and the DPR pilot project to expedite the public's awareness, and facilitate the collaboration with the environmental community regarding the pilot project due to the potential expansion into the Baylands.

The Committee received the information, took no formal action, and noted the following:

- The Committee noted that staff is currently working on increasing their outreach to the immigrant community and utilizing community engagement in multiple languages including Chinese, Vietnamese, and Spanish.
- The Committee acknowledged the 27% opposed to purified recycled water

for drinking on Page 6 of Attachment 1 and noted further education within the local communities as a vital resource.

- The Committee noted the importance of preparing public affairs outreaches for upcoming funding legislature including the possibility for future public hearings.

4.2. Receive an Update on the Partnership with Cites of San Jose and Santa Clara including a Direct Potable Reuse (DPR) Demonstration Project and Provide Feedback.

Recommendation: Receive information and provide feedback.

Kirsten Struve reviewed the information on this item, per the attached Committee Agenda Memo, and the corresponding presentation materials contained in Attachment 1 were reviewed by staff as follows: Kirsten Struve reviewed Slides 1 through 3, Marta Lugo reviewed Slide 3, and Nastaran Basiri, reviewed Slides 4 through 7.

Kirsten Struve, Nastaran Basiri, Jeff Provenzano, Aaron Baker, Marta Lugo, and Antonio Alfaro were available to answer questions.

Katja Irvin addressed the attached emailed comments and fact sheet, identified as Handout 4.2-A. Copies of the Handout were distributed to the Committee and made available to the public.

Katja Irvin expressed support for accelerating the California Environmental Quality Act (CEQA) and permitting for the DPR demonstration project and for it to not cause any delays to the larger DPR project.

The Committee received the information, took no formal action, and noted the following:

- The Committee confirmed the demonstration project will assist with preparing the implementation for a future full-scale DPR facility, maximize benefits for water/wastewater rate payers, and will eventually become a future visitor center for the public.
- The Committee noted the overall timeline for the DPR demonstration project if funding was secured to be generally 5 to 10 years which includes meeting/receiving approval per the pending DPR regulations, technology training, securing a location for the water, and approval from involved partners and the public.
- Chairperson Estremera requested staff to follow up on the alternatives and challenges for expanding the existing Silicon Valley Advanced Water Purification Center in place of the DPR demonstration project.
- The Committee noted their support for staff to follow up on options for accelerating the DPR demonstration project.

4.3. Receive Potential Recycled Water Use at Lake Cunningham Update and Provide Feedback.

Recommendation: Receive information and provide feedback.

Kirsten Struve and Henry Barrientos reviewed the information on this item, per the attached Committee Agenda Memo.

Kirsten Struve, Henry Barrientos, and Jeff Provenzano were available to answer questions.

Sachin Radhakrishnan, addressed the letter of support from the City of San Jose Councilmember Domingo Candelas identified as Handout 4.3-A. Copies of the Handout were distributed to the Committee and made available to the public.

The Committee received the information, took no formal action, and noted the following:

- The Committee noted the significance of continuing the joint collaboration for the restoration at Lake Cunningham and addressing the water quality issues outside of using recycled water by referring this agenda item to a future Joint Valley Water Board meeting with the City of San Jose.

5. **CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS:**

This is an opportunity for the Clerk to review and obtain clarification on any formally moved, seconded, and approved requests and recommendations made by the Committee during the meeting.

Nicole Merritt confirmed that no Items were approved for Board consideration; but noted under Item 4.1, the Committee supported the continued community outreach efforts for the Purified Water Program; under Item 4.2, direction to staff to follow up on options to expand the Purification Center and expedite the DPR demonstration project; and under Item 4.3, direction to staff to add this agenda item to the future Joint Board meeting with the City of San Jose.

6. **ADJOURN:**

Adjourn to Regular Meeting at 10:00 a.m. on April 18, 2024.

Chairperson Estremera adjourned the meeting at 1:01 p.m., and the Committee approved without official action to schedule the next meeting before the end of the year through the Board Scheduler which was subsequently scheduled for a special meeting at 11:00 a.m. on December 15, 2023.

Date Approved:

Nicole Merritt
Assistant Deputy Clerk II



Santa Clara Valley Water District

File No.: 23-1247

Agenda Date: 12/15/2023

Item No.: 4.1.

COMMITTEE AGENDA MEMORANDUM Joint RWPAC with Cities of San Jose/Santa Clara

Government Code § 84308 Applies: Yes ☐ No ☒
(If "YES" Complete Attachment A - Gov. Code § 84308)

SUBJECT:

Expansion of the Purified and Recycled Water System and Development of a Potable Reuse Project.

RECOMMENDATION:

- A. Discuss development of a roadmap and next steps to develop needed agreements for the expansion of the purified and recycled water system and development of a potable reuse project to ensure our community is more drought resilient per the November 17, 2023 action at the joint meeting of the Valley Water Board and the San José City Council; and
- B. Request staff to return with the roadmap, including mutual objectives, timelines and resources needed to complete agreements within two years no later than April 2024 to the JRWPAC.

SUMMARY:

Background

In January 2023, Santa Clara Valley Water District (Valley Water) and the Cities of San José and Santa Clara (Cities) executed a Letter of Intent for Collaborating on the Expansion of Recycled and Purified Water in Santa Clara County (LOI). The LOI recognizes that climate change makes our community more vulnerable to extreme weather conditions, including periods of long-term drought and more intense wet-weather events. To prepare for these extreme and uncertain events, the availability of drought proof water supply and efficient water management justifies the significant and rapid expansion of recycling treated wastewater from the San José-Santa Clara Regional Wastewater Facility (RWF). This expansion program will provide the flexibility to serve many uses including the outdoor irrigation of functional landscape and the provision of advanced purified recycled water for drinking water purposes.

Santa Clara County relies on imported water for half its water supply, which becomes vulnerable as the snowpack shrinks due to climate change. A principal goal agreed to by the Cities and Valley Water in the LOI is to maximize the use of treated wastewater to best serve the water supply needs of the community and to develop a more sustainable, water-resilient future in the face of climate

change.

On November 17, 2023, the Valley Water Board and San José City Council provided the following guidance to staff to ensure development of win-win solutions that meet the Cities' and Valley Water's needs:

- Confirmed support for aggressively pursuing a joint project to meet local water supply needs, including both a demonstration and full-scale potable reuse project that is the largest size practicable within funding, environmental, and technical constraints.
- Confirmed support for development of the feasibility study, demonstration facility and institutional arrangements, including lease and wastewater availability agreements, within two years.
- Confirmed support for coordinated public outreach program to ensure the success of a direct potable reuse project.
- Twice-yearly or as-needed updates to the Joint Recycled Water Policy Advisory Committee (JRWPAC).

Non-Potable Recycled Water Expansion

Valley Water and the Cities have long collaborated on recycled water projects. This has included the development of South Bay Water Recycling (SBWR), a non-potable system (aka purple pipe), and the Silicon Valley Advanced Water Purification Center (SVAWPC), which opened in 2014. The SVAWPC has been a success story and instrumental in boosting the non-potable recycled water's usage at more landscape and industrial settings by producing purified water and mixing it with recycled water to enhance the water quality (e.g., decreasing the total dissolved solids). In addition, the SVAWPC has helped Valley Water garner more public support for future potable reuse and perform critical studies that have helped prepare for future regulations.

San José plans to increase recycled water use through SBWR by 10,000-acre feet per year (AFY) with a focus on irrigation at schools and parks. SBWR currently delivers water to over 900 customers in San José, Santa Clara, and Milpitas for irrigation, dual toilet flushing, cooling towers and other industrial purposes. Valley Water's Water Supply Master Plan recognizes that wastewater partners in the county will expand non-potable reuse.

Potable Reuse

Valley Water worked with the County's wastewater agencies to develop the Countywide Water Reuse Master Plan (CoRe Plan) in 2021. The CoRe Plan's main emphasis was on Valley Water's goal of developing 24,000 AFY of potable reuse in the County. The CoRe Plan included evaluation of wastewater availability, regulatory and technical needs, governance structure, and potential project portfolios. At the time, Indirect Potable Reuse, which uses advanced purified water to replenish

groundwater basins, was the only possible type of potable reuse and is therefore the first phase of Valley Water's potable reuse implementation. Valley Water is currently making progress on this goal with an up to 10,000 AFY indirect potable reuse project in Palo Alto.

Since then, the Direct Potable Reuse (DPR) Regulations have been released for public comment and are likely to be finalized in 2024. DPR regulations will permit the delivery of advanced purified water directly to consumers or delivery before a water treatment facility. Direct Potable Reuse allows the water to efficiently serve many uses, in a more flexible manner than groundwater replenishment. Consequently, it was determined to be the preferred potable reuse approach for collaboration between the Cities and Valley Water. Compared to the SVAWPC, the DPR treatment method will be more stringent and includes additional treatment steps to ensure that the water is always safe to drink. A Direct Potable Reuse facility would be situated next to, but separate from the SVAWPC, since the SVAWPC provides an essential and permitted function to the SBWR system. The existing infrastructure would be integrated as much as feasible.

Based on consultation with our technical experts and discussions with our peer agencies, development of a demonstration facility as part of developing a full-scale facility is needed. While the draft regulations do not specifically mention development of a demonstration facility, the steps required to obtain regulatory permits for a full-scale facility necessitate the demonstration facility to ensure public health is protected. Specifically, the draft regulations state in § 64669.50. Chemical Control:

“(2) A Direct Potable Reuse Responsible Agency shall submit a validation study protocol for the ozone/BAC process that complies with this subsection to the State Board for review and written approval prior to conducting the validation study. ...The validation study protocol shall include proposed surrogate and/or operational parameters to be used in the validation study. The ozone/BAC process shall be re-validated when the full-scale operating conditions or control strategy are inconsistent with the previous validation study conditions.”

And § 64669.45. Pathogen Control

*A validation study report documenting the validation study methodology and **results** shall be submitted to the State Board as part of the submittal of the engineering report prepared pursuant to section 64669.75... The validation study report shall identify the LRV (log removal value) demonstrated by each treatment process for each pathogen pursuant to subsection (a)(5)(C)(9.), the operating envelope, and the critical limit(s) for each validated treatment process... § 64669.45.(a)(5) (D)*

Demonstration Facility

A demonstration facility will provide this initial validation and, in addition, will take into account the

RWF wastewater quality. The demonstration facility would not only validate results, but could save significant capital and operating costs, because it will allow the full-scale facility to be designed in the most efficient and effective way and allow for consideration of future advances in technologies that would meet the desired outcome of protecting public health.

In addition, operating a full-scale Direct Potable Reuse facility requires new highly trained certified operators as well as new institutional arrangements and a clear division of the duties and responsibilities of the wastewater and water agencies involved. The demonstration facility would help expedite a full-scale facility and provide the following benefits:

- Operational and performance testing to inform treatment process selection and research;
- Regulatory approvals and permitting;
- Public outreach and education;
- Development of needed institutional arrangements; and
- Training of operations staff and required State certification to run a purification facility.

The proposed demonstration facility will play a crucial role in the assessment and demonstration of treatment technologies to satisfy the new Direct Potable Reuse regulatory requirements. It will also provide the engineering framework for building a full-scale Direct Potable Reuse facility that would safeguard public health and provide drought-proof potable water. Our peer agencies, Metropolitan Water District and Los Angeles Water and Power are planning direct potable reuse demonstration facilities to ensure the most cost-effective design for future full-scale facilities, operator training, permitting, and public support.

The demonstration must be of a sufficient size to ensure that the results produced at the facility are reflective of future full-scale conditions, sophisticated enough that systems can be run reliably, and reflective of future equipment to allow staff to gain experience operating and maintaining it. Due to the high cost of the 1 MGD facility, staff continues to evaluate the right size of the demonstration facility to fit our needs and budget, including detailed evaluation of 0.1 MGD, 0.5 MGD and 1 MGD demonstration sizes costs and benefits. Given that the existing visitor trailer is at the end of its useful life, the demonstration facility also presents an opportunity to ensure the public is supportive of direct potable reuse.

Considerations

Staff from the Cities and Valley Water are addressing all needed elements for a collaborative direct potable reuse project. The technical, environmental, and regulatory considerations are just as critical and complex as the financial and institutional arrangements. The following items need to be addressed:

- Technical issues:
 - Understand wastewater availability and appropriate sizing of a future facility considering the expansion of the non-potable system and the impacts of water conservation on wastewater flows, as well as seasonal changes in flow. A technical analysis is currently being performed to develop this information.
 - Understand water utilization in the water supply system. A study is currently being performed to develop delivery connection alternatives.
 - Wastewater quality considerations including analysis of additional source control needs, if any, while avoiding impacts to businesses and development.
 - Treatment steps and meeting DPR regulatory requirements.
 - Development of demonstration facility, including needed additional land.
- Financial and Institutional Arrangements:
 - Development of wastewater delivery agreement.
 - Development of a lease agreement for additional land that will be needed adjacent to SVAWPC.
 - Operations and maintenance arrangements, including data sharing, waste stream discharges including Reverse Osmosis concentrate, and permitting.
 - Formation of a Direct Potable Reuse Responsible Agency as required by the DPR regulations.
 - Private activity analysis for RWF bonds, which may further refine the size of the facility and the delivery method.
 - San Francisco Public Utilities Commission (SFPUC) collaboration: The Cities performed a feasibility study with SFPUC for a potable reuse project related to the SFPUC Alternative Water Supply Plan.
 - Financial arrangements.
- Environmental Impacts
 - California Environmental Quality Act (CEQA) and, if needed, National Environmental Policy Act (NEPA) analysis.

- Understanding energy use and consumption.
- Ensuring Reverse Osmosis Concentrate management in an environmentally responsible manner.
- Procurement, Design, Construction and Permitting
 - Determining delivery method (e.g., design bid build, design build, etc.).
 - Preparation of engineering and validation reports to support permitting.
 - Design, construction, permitting of demonstration and full-scale facility.
- Public outreach: Ensure public support for potable reuse, via tours of SVAWPC, speakers bureau, multi-lingual outreach, mobile outreach, etc.
- Affordability: Ensure grant readiness via preparation of a feasibility study and CEQA/NEPA.

Funding and Timeline

In February 2023, the Cities and Valley Water collaborated on a grant application to the United States Bureau of Reclamation WaterSMART program for financial resources to implement the LOI. The San José-Santa Clara Purified Water Program Feasibility Study was recently funded with \$381,249 by Reclamation for a total project cost of \$1,524,996. Preparation of a feasibility study is a prerequisite for obtaining construction grants in the future with Cities and Valley Water committed to work together on its development.

Valley Water staff, in collaboration with the Cities, is continuing to develop the Direct Potable Reuse project, including updating the costs and developing a Capital Improvement Program (CIP) project for a 1 million gallon per day DPR Demonstration Project. At this time, preliminary cost estimates are \$42 Million for capital and \$2 Million for Operation and Maintenance. Staff will work with San José and Santa Clara staff to better refine project needs. The timeline to implement the DPR demonstration facility is 3 to 5 years.

To support progress in these areas, the City of San José's 2023-2024 Adopted Budget allocated a Senior Environmental Program Manager position on an ongoing basis. Twenty percent is funded through by the General Fund, and the recycled water utility funds the remainder. This position will support efforts in leading the recycled water utility (South Bay Water Recycling) in new water supply focus areas supporting the increased use and availability of recycled water, such as increasing use of recycled water in a manner that supports the RWF in long-term Nutrient Removal Strategies, negotiate and implement contracts and agreements with local stakeholders, and lead implementation of studies or pilots to mitigate contaminants of emerging concern. The position will also lead South Bay Water Recycling in water utility-focused initiatives, including all current and anticipated aspects

of administration, regulatory compliance, and adherence to State-approved rules and regulations; public safety; contract and agreement negotiations; development and implementation of operating and capital budgets; and to represent the recycled water utility with local partners and stakeholders.

In addition to the 1.0 FTE available to support water supply projects, per a 2022 Master Agreement between Valley Water and the City of San José, Valley Water provided \$100,000 to fund City staff costs in supporting Valley Water's Purified Water Program.

Next Steps

Discussions on additional support that may be needed are ongoing, including staffing of a team needed at the City and Valley Water to implement the collaborative projects, and will be finalized early next year. These budget recommendations will be brought to JRWPAC no later than April.

Staff recommends developing a roadmap for consideration by the JRWPAC at its next meeting in April to develop necessary interagency agreements for lease and wastewater delivery within two years, including more detailed definition of the project (tie ins), potential collaboration with SFPUC, and private activity analysis. Staff is already developing the technical considerations related to wastewater availability, water supply connections and the demonstration facility. Staff propose to have a progress report to the JRWPAC at least annually, with the first being a roadmap, and fully developed lease and water availability agreements within two years.

In response to the joint meeting, staff from the City and Valley Water will discuss a coordinated outreach program to ensure public support for potable reuse, including coordinating on the messaging, identify key constituencies and stakeholders, and the timing of the public outreach plan - with a lens of ensuring that disadvantaged communities are engaged with and worked with to identify their needs and input.

ENVIRONMENTAL JUSTICE IMPACT:

There are no Environmental Justice impacts associated with this item.

ATTACHMENTS:

Attachment 1: PowerPoint

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138

THIS PAGE INTENTIONALLY LEFT BLANK

PURIFIED AND RECYCLED WATER

DECEMBER 15, 2023

JOINT RECYCLED WATER POLICY ADVISORY COMMITTEE – CITY OF SAN JOSE / SANTA CLARA VALLEY WATER DISTRICT / CITY OF SANTA CLARA



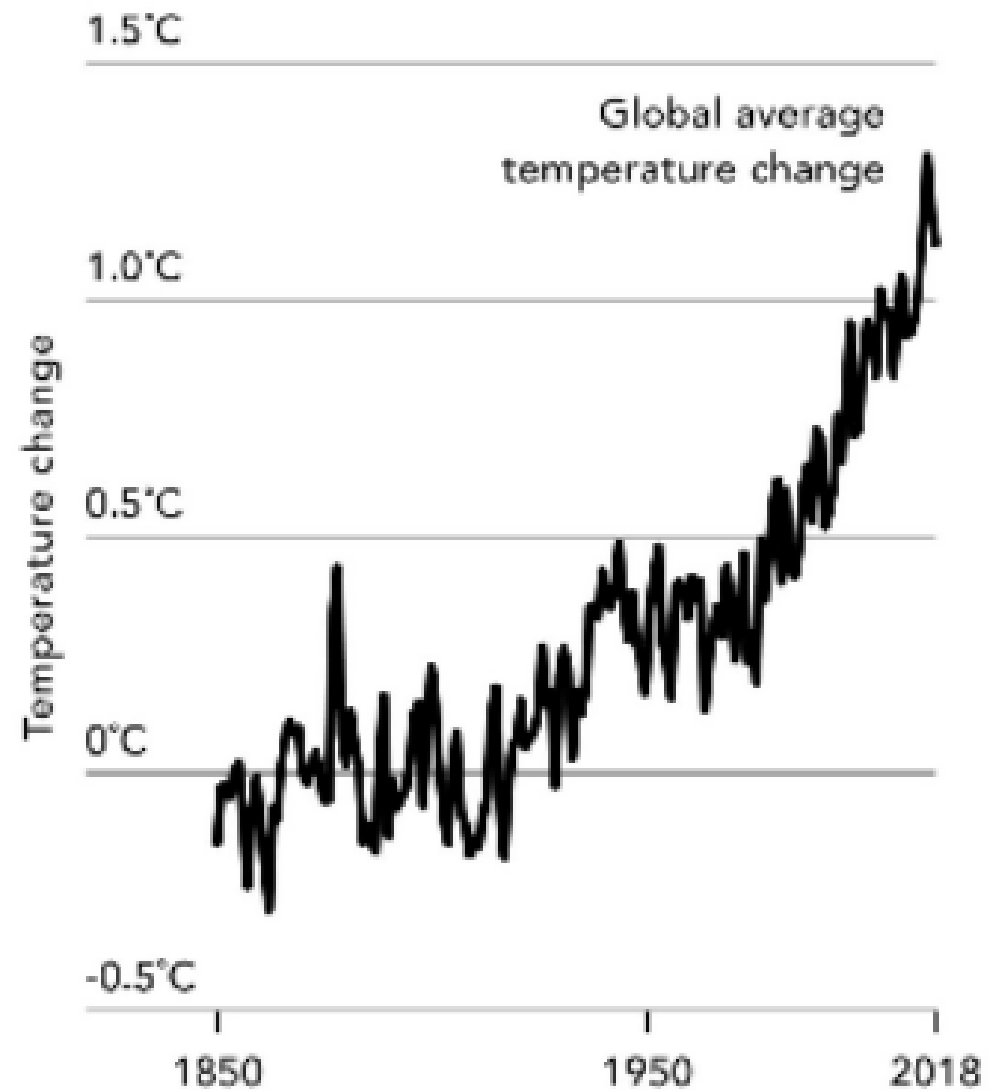
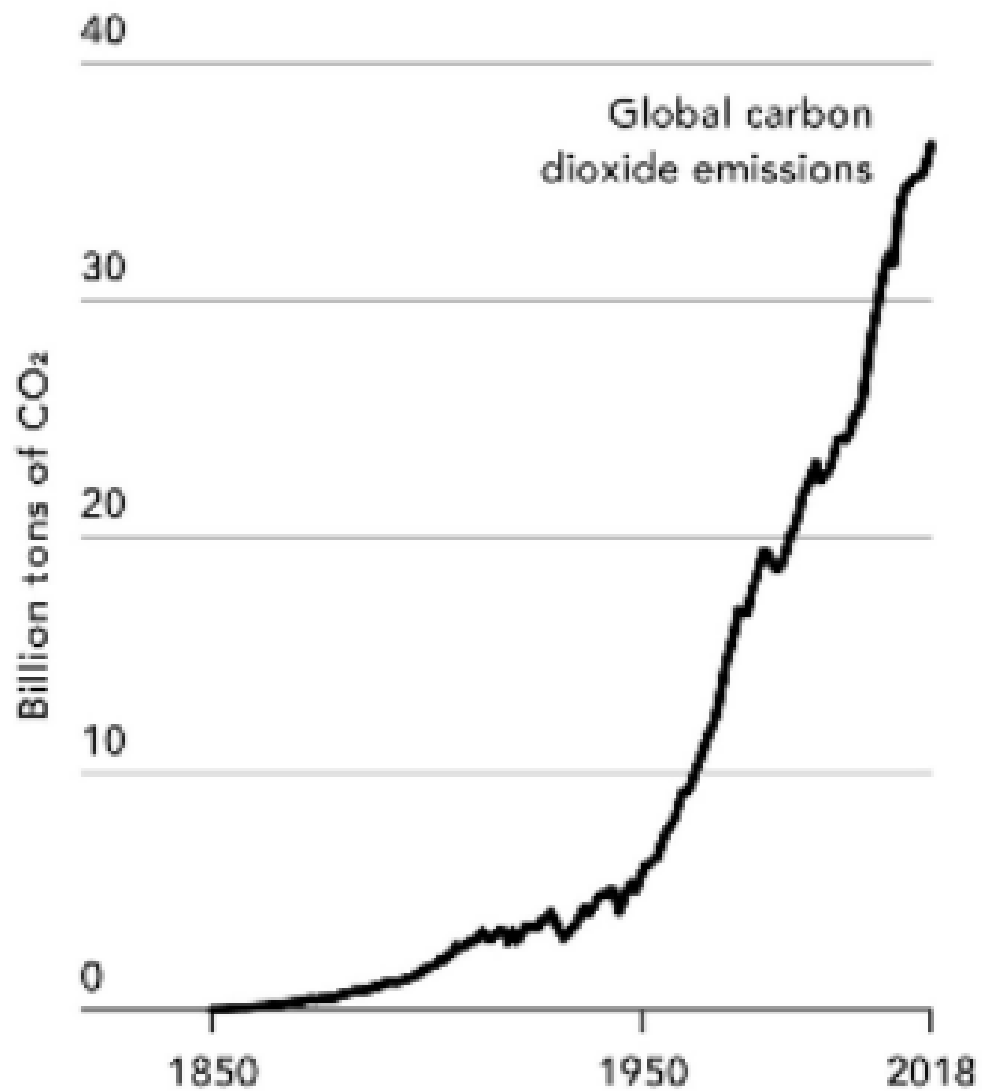
Kip Harkness, Deputy City Manager

Melanie Richardson, Assistant Chief Executive Officer



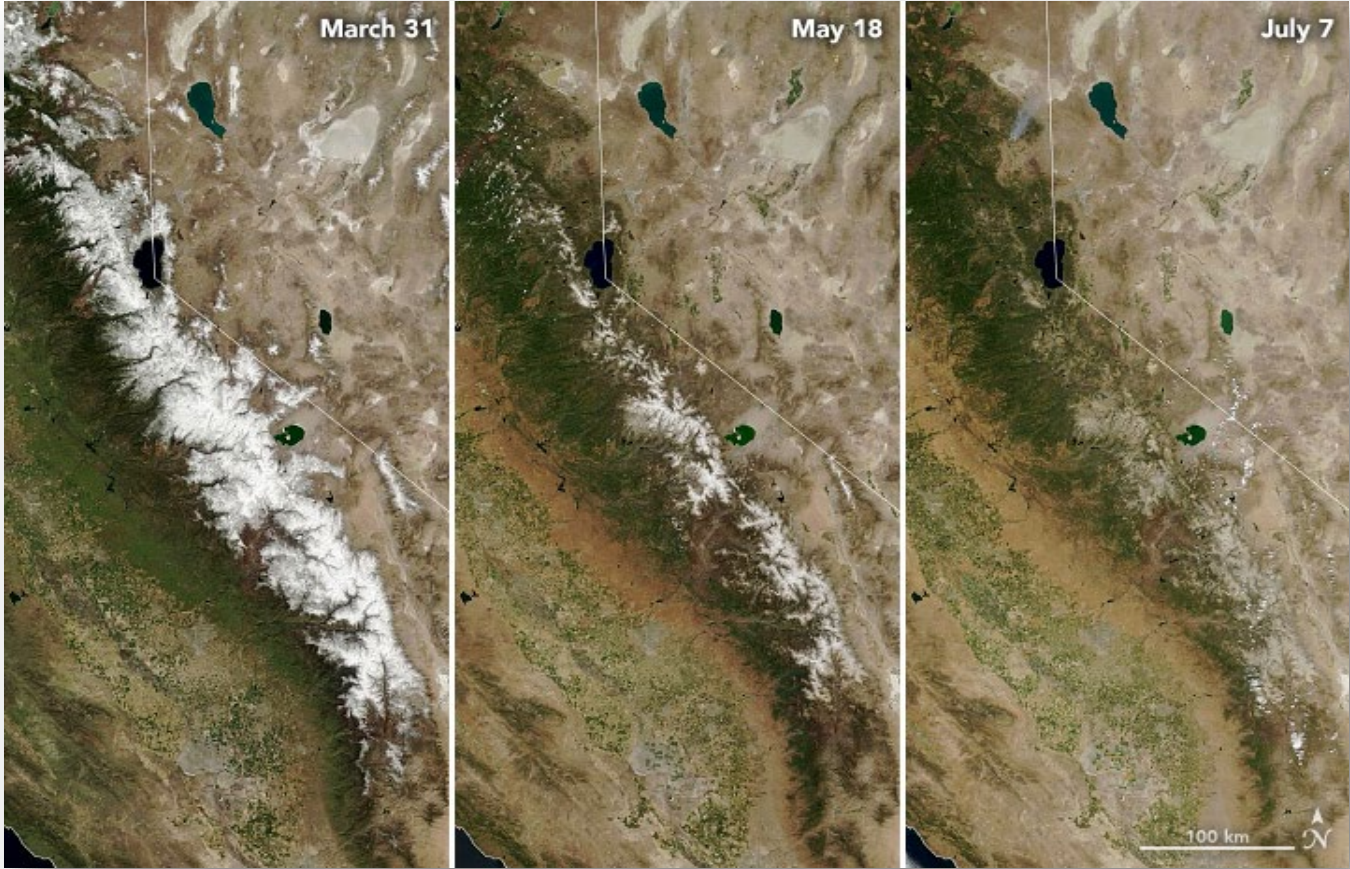
Jeff Provenzano, Deputy Director, Environmental Services Department

Kirsten Struve, Assistant Officer, Water Supply Division



Climate Change

Impacts to Imported Water – 50% of county’s water supply



2021



2021



2023

Collaborating on Solutions

Mutual Goals for Improved Water Supply Reliability

2023 Letter of Intent

- Meeting each Party's respective water supply needs
- Maximize the use of treated wastewater to best serve the water supply needs of the community
- Develop a more sustainable, water-resilient future



The Solution – Water Reuse

Ensuring Water Reliability

- Protects us from impacts of climate change
- Creates a new drought-resilient and locally controlled water supply
- Reduces dependency on imported water



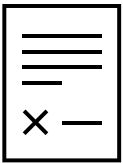
Pathway to Potable Reuse

- Silicon Valley Advanced Water Purification Center enhances non-potable system
- Direct Potable Reuse allows greatest flexibility for water supply
- New regulations will require additional treatment processes and new institutional arrangements
- Demonstration facility is necessary first step to a full-scale project

Benefits:



Regulatory
Permitting



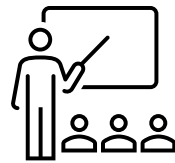
Interagency
Agreements



Train
Operators



Operational
and Technical
Studies



Outreach and
Public Perception

Example Demonstration Facilities



City of San Diego Pure Water Program



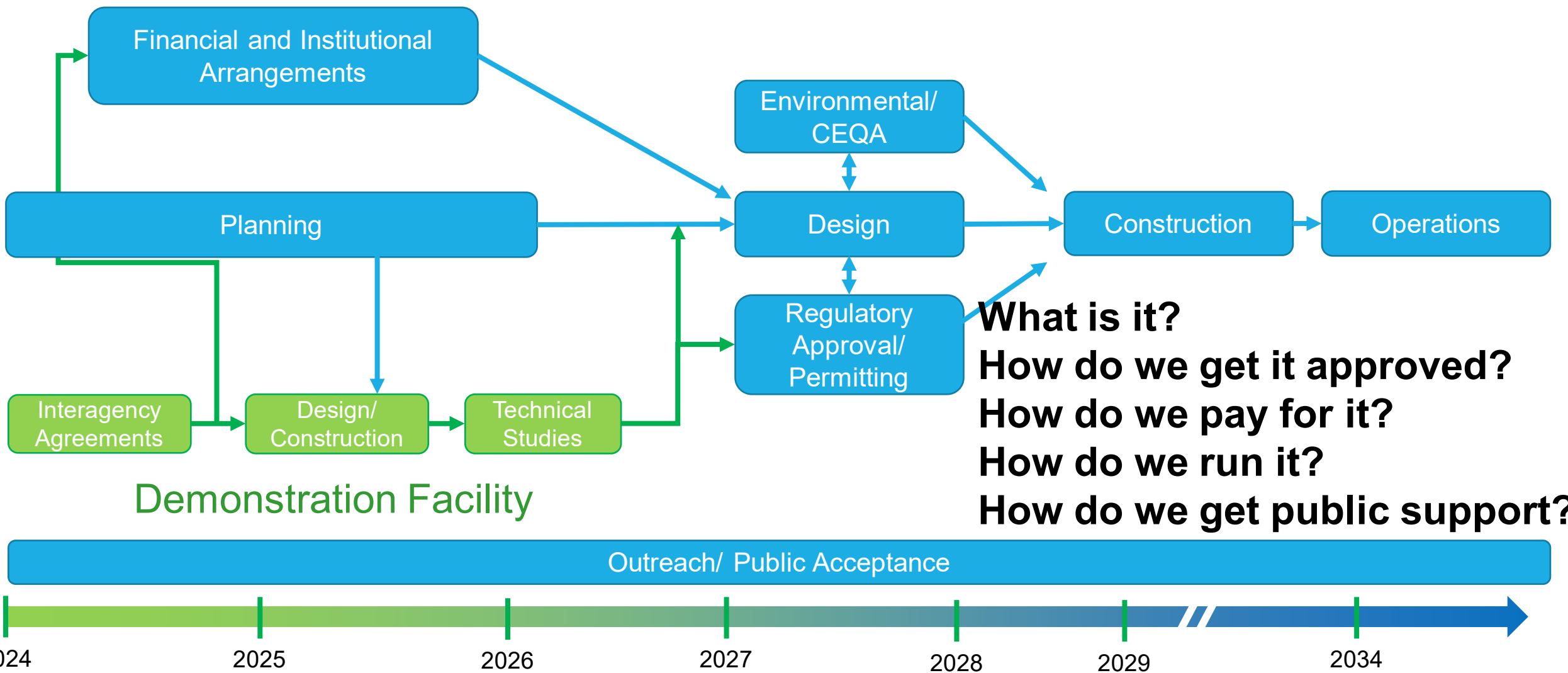
Metropolitan Water District of Southern
California

Direct Potable Reuse Regulations

A **validation study** report documenting the validation study methodology and **results** shall be submitted to the State Board as part of the submittal of the engineering report prepared pursuant to section 64669.75... The validation study report shall identify the LRV (log removal value) demonstrated by each treatment process for each pathogen pursuant to subsection (a)(5)(C)(9.), the operating envelope, and the critical limit(s) for each validated treatment process... § 64669.45. – Pathogen Control

A Direct Potable Reuse Responsible Agency shall submit a **validation study** protocol for the ozone/BAC process that complies with this subsection to the State Board for review and written approval prior to conducting the validation study. ...The validation study protocol shall include proposed surrogate and/or operational parameters to be used in the validation study. The ozone/BAC process shall be **re-validated when the full-scale operating conditions** or control strategy are inconsistent with the previous validation study conditions. § 64669.50. Chemical Control

Full-Scale DPR Project Implementation is Complex



Demonstration Facility Size and Cost Evaluation

- 0.1 Million Gallons Per Day – while lowest cost and size, this facility would not reflect full-scale operations and is therefore not sufficient for regulatory permitting and operator certification purposes

The following two sizes are likely sufficient for regulatory permitting purposes and will be further evaluated:

- 0.5 Million Gallons Per Day - Estimated Cost: \$25 - 30M with \$1M operating cost
- 1.0 Million Gallons Per Day - Estimated Cost: \$42M with \$2M operating cost

This aerial map illustrates the proposed layout for an industrial park, overlaid on a grayscale aerial photograph. The map is divided into several color-coded zones and features labeled with text:

- SALT MARSH & MUD FLAT:** Located in the upper left corner, colored in light green.
- TERRACED HABITAT WITH NATURE WALKS:** A large green area in the upper center.
- NATURE MUSEUM:** A small green area within the terraced habitat.
- EFFLUENT PONDS:** A green area in the center, adjacent to the nature museum.
- FRESHWATER WETLANDS:** A green area in the upper right, near a levee.
- LEVEE:** A red line indicating a boundary or water control structure.
- RENEWABLE ENERGY:** A yellow area in the center-right.
- FLEXIBLE SPACE:** A yellow area in the lower right.
- EXISTING LEVEE:** A red line on the right side of the map.
- MAIN EFFLUENT RELEASE:** A blue line indicating a water release point.
- DON EDWARDS WILDLIFE REFUGE:** A green area on the left side.
- BAY TRAIL:** A blue line running through the center.
- LANDFILL:** A brown area in the center.
- EXISTING PLANT:** A gray area in the center.
- OWL HABITAT:** A brown area in the lower left.
- ARTESIAN SLOUGH:** A blue area in the lower left.
- RECREATION:** A green area in the lower center.
- R&D INSTITUTE:** A red area in the lower center.
- RETAIL:** A red area in the lower center.
- ARTIST:** A purple area in the lower right.
- LIGHT INDUSTRIAL:** A yellow area in the lower right.
- R&D:** A yellow area in the lower right.
- OLIVER:** A blue area in the lower right.
- COAST GUARD:** A blue area in the lower right.

The map also includes a north arrow in the upper right corner and a scale bar in the lower left corner.

Siicon Valley Advanced Water Purification Center

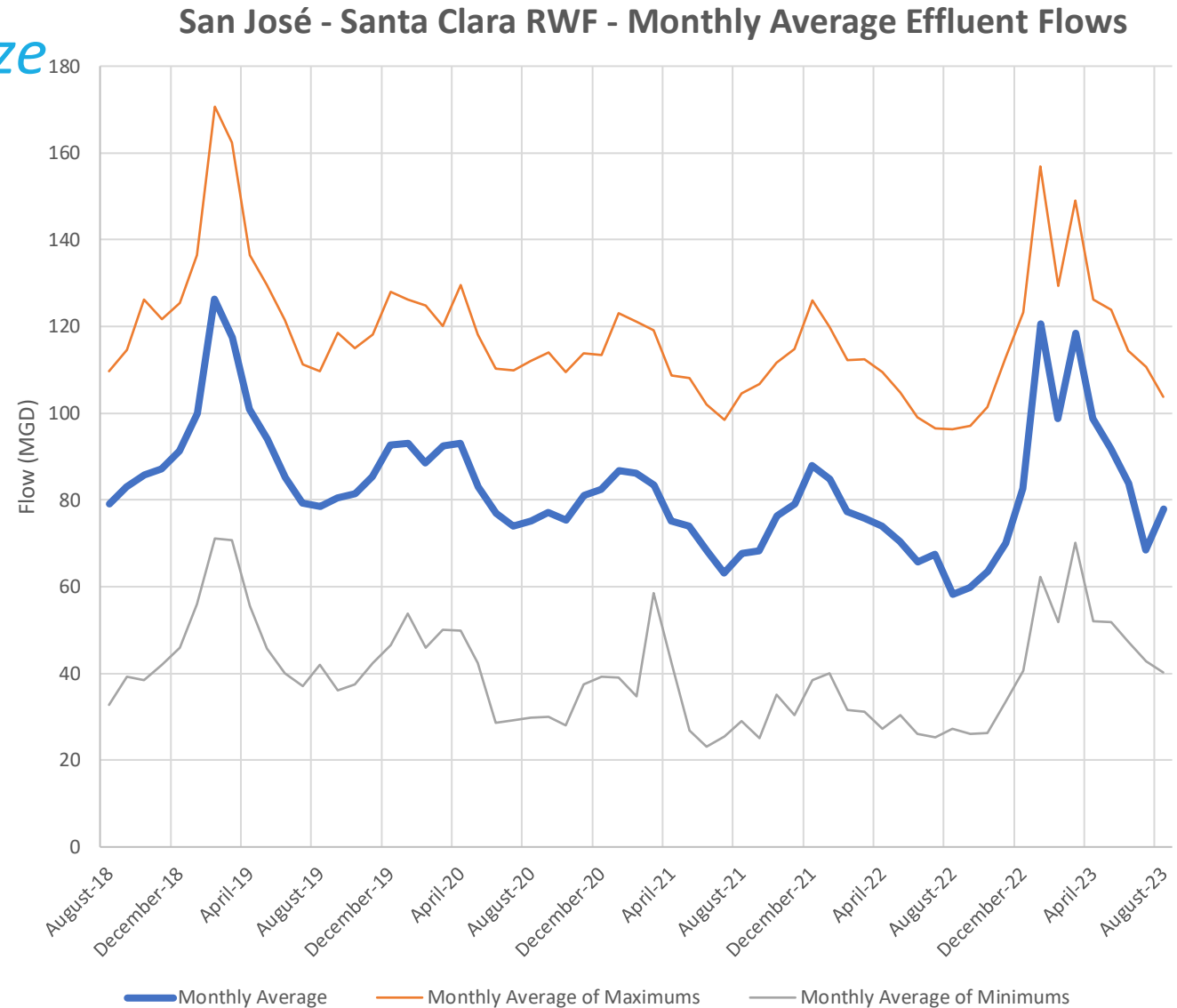
Proposed Advanced Water Purification Facilities

Zanker Rd

Project Considerations

Wastewater Availability and Facility Size

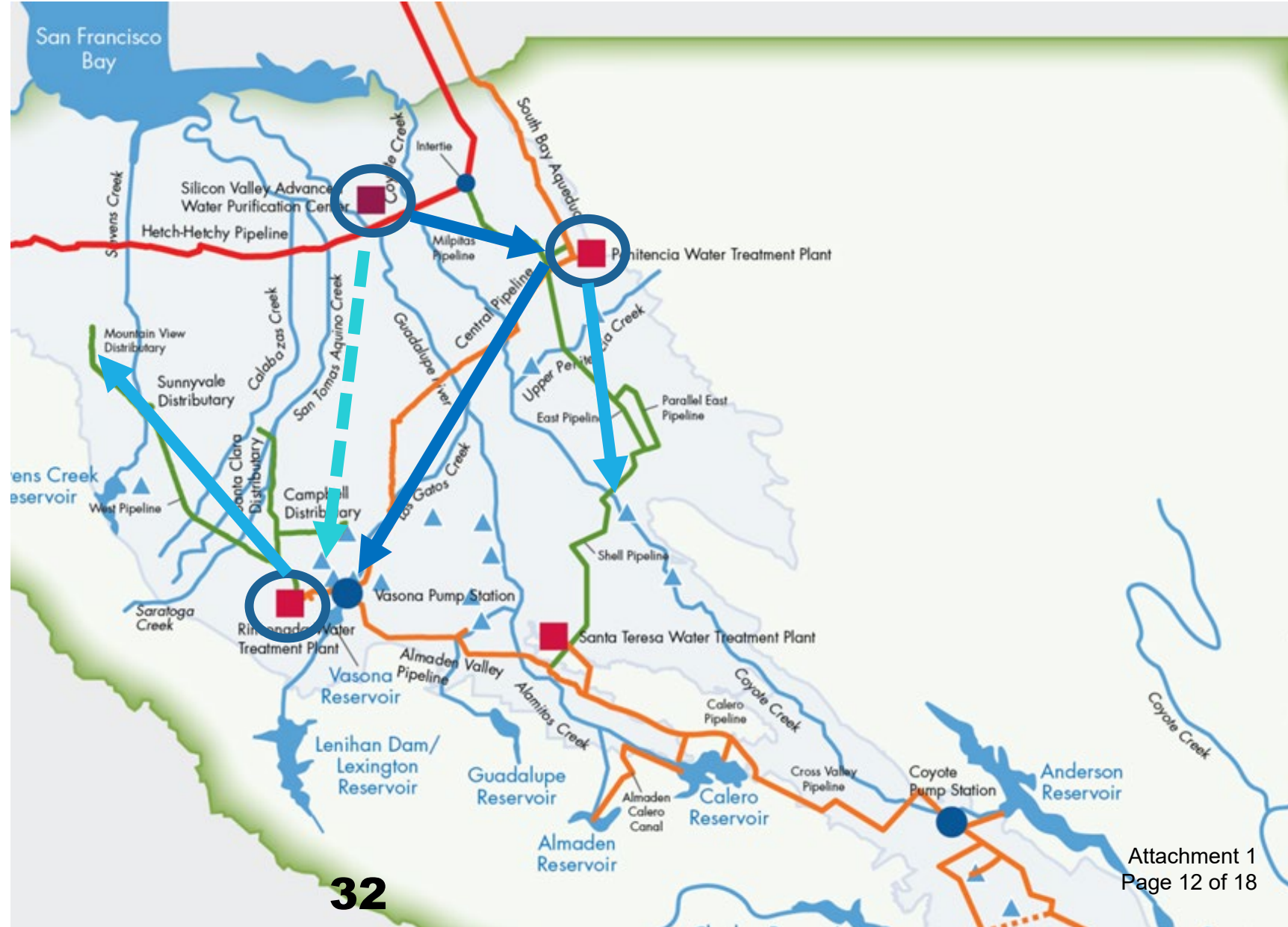
- Understand wastewater availability given increased water conservation and significant variation (seasonal/annual)
- Drought = less wastewater available
- Expansion of the non-potable system (SBWR) will impact wastewater availability for potable reuse



Project Considerations

Water Utilization

- Understand where and how potable reuse facility will be connected to the water supply system and infrastructure needs
- Understand water supply needs (dry year vs. wet year)
- Meet blending requirements



Project Considerations

Reverse Osmosis Concentrate Management



Ensure Reverse Osmosis Concentrate management in an environmentally responsible manner



33



Exploring Nature Based Solutions: Horizontal Levee, Floating Wetlands and engineering options

Project Considerations

Potable Reuse Outreach – public support

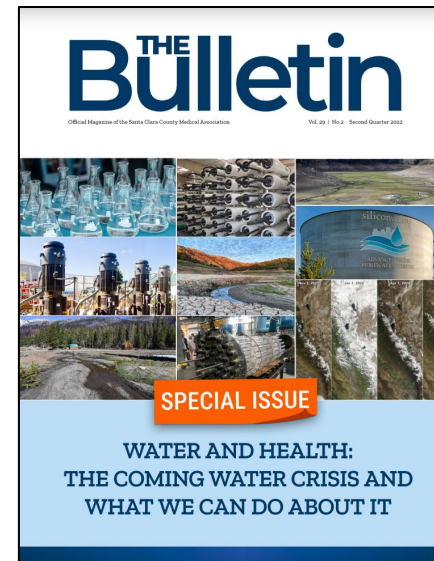
Community Events & Presentations



Public tours and private tours



Stakeholder Endorsements

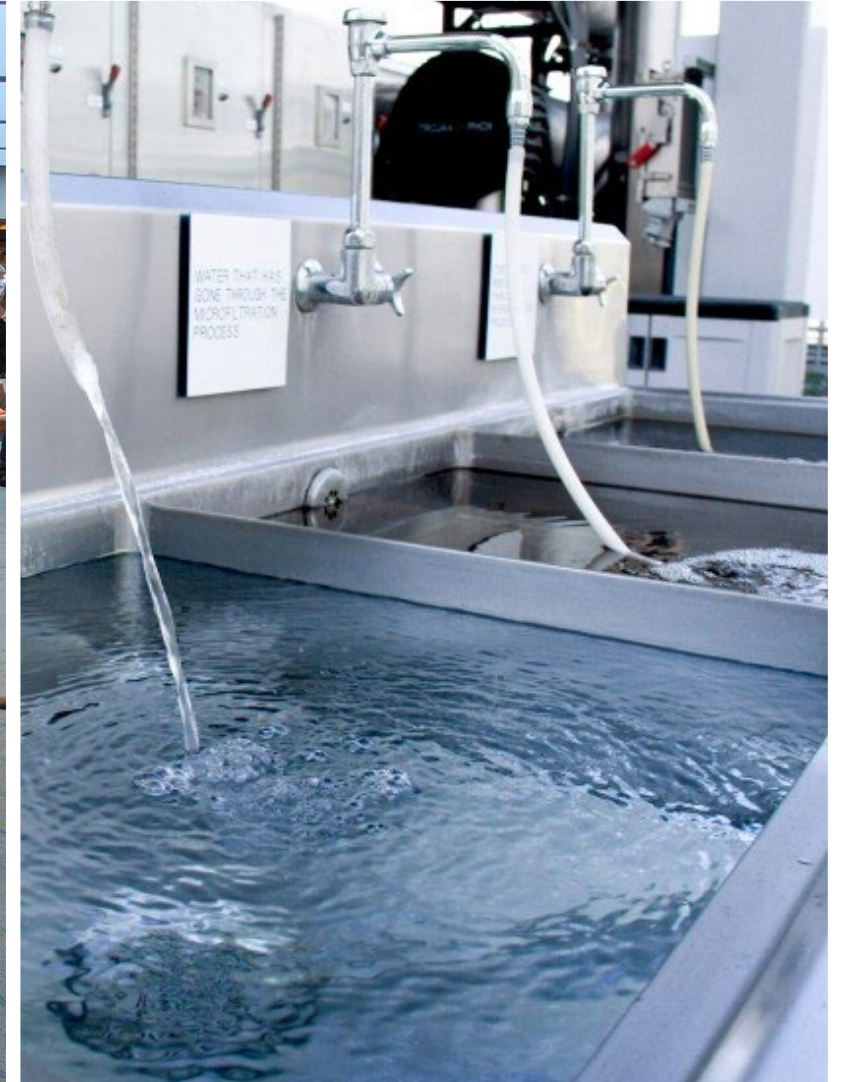


Inclusive & Equitable Outreach



Public Outreach Needs

Water Demonstration & Interactive Education



Project Considerations

Institutional Arrangements

- Land Lease
- Wastewater Delivery Agreement
- Direct Potable Reuse Responsible Agency
- Private Activity Analysis
- Operations and Maintenance
- San Francisco Public Utilities Commission Collaboration



November 17 Action

- **Confirm support for pursuing a joint project to meet local water supply needs, including a demonstration and full-scale project that is the largest size practicable**
- **Confirm support for the development of a feasibility study for the full-scale project**
 - Valley Water awarded a USBR WaterSMART grant for more than \$380,000 for a collaborative study with the cities
 - Feasibility study and agreements required for future construction grant funding
- **Confirm support for the development of land lease and minimum wastewater delivery within two years**
- **Confirm support for a coordinated public outreach program**
- **Twice a year or as needed updates to JRWPAC**

Next Steps

- Continue technical analyses of wastewater availability and water supply connections
- Continue to develop staff funding needs and budget recommendations
- Develop roadmap to develop interagency agreements
- Discuss coordinated outreach program
- JRWPAC in April